Report on the 2004 Assessments of Goosefish and Weakfish in the Northeast United States

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Prepared for

University of Miami

Independent System for Peer Review

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Executive Summary

The 2004 assessments of Goosefish and Weakfish in Northeast United States waters were reviewed as part of the SARC 40 (Stock Assessment Review Committee No. 40) process. The assessment for Scup was withdrawn from the SARC and was not discussed. The Assessment Review Panel met at Woods Hole, Massachusetts from 29 November – 2 December 2004. The assessments of the stocks of Goosefish and Weakfish were presented to the Panel and the validity of the data, assessment procedures and results were discussed. The Panel Members then prepared their individual reviews.

The goosefish assessment is considered an adequate representation of the state of the stock in relation to the biomass reference points used and I agree with the findings of the Southern Demersal Working group meeting that in relation to agreed reference points, the resource is not overfished in either the northern or southern stock management areas. I also agree that fishing mortality rates (F) estimated from the NEFSC and Cooperative surveys are not sufficiently reliable to provide a meaningful comparison with F reference points. The Working group has adequately addressed its terms of reference.

The weakfish assessment is only partially complete and the working group was unable to address all of its terms of reference. The assessment is compromised by the conflicting signals between the commercial and recreational catch at age data and the fishery-independent surveys. This leads to a strong retrospective pattern in the ADAPT with fishing mortality in the terminal year consistently underestimated and stock biomass consistently overestimated. I consider that the results of the assessment are inadequate to form the basis of management advice.

1. BACKGROUND

This report reviews the 2004 assessments of goosefish (*Lophus americanus*) and weakfish (*Cynoscion regalis*) in northeast US waters, at the request of the University of Miami (see Appendix 5). The SARC was also requested to review the assessment for scup (*Stenotomus chrysops*), however this assessment was withdrawn and was not reviewed The author was provided with draft stock assessment reports and web access to relevant files and documents (Appendix 4), and participated in the 40th Northeast regional Stock Assessment Workshop (SAW40) Stock Assessment Review Committee (SARC40) Meeting.

2. REVIEW ACTIVITIES

The SARC 40 meeting was held at the Aquarium Conference Room - Northeast Fisheries Science Center, Woods Hole, and Massachusetts from 29 November – 2 December 2004. The Panel membership is listed in Appendix 1. The agenda for the meeting is in Appendix 3.

The meeting was conducted under the “new model” of SARC reviews. The meeting was open, and was attended by observers including members of the fishing industry. The draft assessment of each stock was presented to the Panel and other attendees, and the input data, assessment approach, results and utility of the findings for management were evaluated through open discussion. The Terms of Reference for each stock assessment (Appendix 2) were reviewed to ensure they had been fully addressed, and recommendations from the previous SARC report were reviewed to determine the extent to which they had been addressed.

3. FINDINGS

3.1 Goosefish (*Lophius americanus*)

3.1.1 Summary

The assessment presented at SARC40 provided a thorough evaluation of the available data and indicators and is considered of acceptable quality as a basis for fishery management. The basic stock indicators point to a state of overexploitation although there are indications that biomass has increased from an historic low primarily due to increased recruitment. Estimates of fishing mortality from surveys are considered unreliable and should not be used to assess the exploitation rate in relation to fishing mortality reference points. However basic information on trends in the mean size in commercial catches indicates that overall exploitation rates may be too high, thereby bringing into question the utility of the agreed reference points.

3.1.2 Comparison with previous assessment (SAW 34)

The previous assessment of goosefish indicated that based on existing reference points, the goosefish resource was overfished and that overfishing is occurring in both stock management areas (north and south). The current assessment indicates that in relation to existing reference points, the resource is not overfished in either stock management area,

3.1.3 Fishery data used for the assessment

US estimates of catches and effort were derived from vessel trip reports, dealer landings records and on-board fishery observers. Discard estimates were included in estimates of total catch. US catch and effort data were examined separately for the three principal gears; Scallop dredge, large and small mesh gill net, and otter trawls. Foreign landing estimates were reports from NAFO. There have been several changes to the way estimates of live weight are derived over time, which may have led to changes in the error structure of the catch estimates. Estimates for the years 2001 and later may be subject to revision.

3.1.4 Fishery independent data used for the assessment

Fishery-independent data were comprised of the NEFSC spring and autumn bottom trawl surveys (1962-present), the ME-NH inshore survey (1999-present) and Cooperative goosefish surveys (2001 and 2004). NEFSC survey indices had been standardised to adjust for statistically significant effects of trawl type and vessel on catch rates.

The utility of the ME-NH inshore survey as an assessment tool for goosefish is limited at present because of the short time-series of data (1999-present). However, it may become a useful recruitment predictor as the time-series develops.

The long-time series of NEFSC survey data gives a good indication of the trends in the population. While there has been a general decline in swept area biomass estimates over time, especially in the north with a slight upturn since the late 1990s, this is primarily due to increased catch rates of juveniles, which is interpreted as an increase in recruitment. At the same time, the basic stock indicators of minimum, mean and maximum length in the catches continue to show a decline, indicating continued overexploitation.

A full comparison of the results of the 2001 and 2004 cooperative surveys has not yet been possible since the data from the 2004 survey were still in the process of being worked up at the time of the Working Group. Provisional estimates of swept area biomass indicated that biomass has increased in the area as a whole between 2001 and 2004. This trend is consistent with the results from the NEFSC survey series.

The Cooperative survey is comprised of both fixed (industry-selected) and random stations and they were treated equally in the analysis. I suggest that an examination of the effects of eliminating the fixed stations from the analysis would be useful. I also suggest that a geostatistical approach to evaluating the data may mitigate any potential bias in the survey design and would be worth investigating.

3.1.5 Assessment Methods

Methods used included biomass and abundance estimates from the NEFSC surveys and the Co-operative survey and egg production estimates from the NEFSC survey length composition data. Additional biological indicators, growth, maturity and estimates of exploitation rates were also derived. A further analysis using a Bayesian surplus production model which integrates fishery catch estimates, research survey indices and Cooperative survey biomass estimates to estimate stock biomass, exploitation rates, and reference points was also undertaken.

A crucial assumption relating to the Bayesian surplus production is the value assumed for the prior distribution for r (the intrinsic rate of population growth). While I agree with the Working Group's argument that a value of r=0.5 is probably appropriate based on what is known about goosefish life history, I also agree with the conclusion of the Working Group that the results are not sufficiently reliable to be used at present because of the preliminary nature of the biomass estimates from the co-operative research survey.

3.1.6 Results of the assessment

The stock indicators from the surveys were all relatively consistent giving some confidence in the validity of the results in terms of population trends. The estimates of fishing mortality rates cannot be considered reliable. In relation to agreed biomass reference points, the assessment indicated that the stock is not overfished in either the northern or southern management area. Other indicators suggested that exploitation rates are higher than desirable. The minimum, mean and maximum size in the catches showed a declining trend over time, suggesting a high exploitation rate. This trend is compounded by the apparent increase in recruitment in the recent period and a more detailed analysis of the mean size and age in the catch may prove informative with respect to the relative exploitation rate.

3.1.7 Recommendations of previous review

The recommendations of the SARC 34 were as follows:

1) Research should be continued to define stock structure, including genetic studies, reproductive behavior analyses, morphometric studies, parasite studies, elemental analyses, and studies of egg and larvae transport.
2) The SARC recommended changing the overfishing definitions for goosefish. Research on yield per recruit for goosefish should be conducted to examine the

effect and possible causes of differential natural mortality rates by sex, methods to estimate gear selectivity, and the incorporation of discards.
3) Surplus production modeling should be continued with special emphasis placed on uncertainty in under-reported catches and population size prior to 1980.
4) Size selectivity studies should be conducted in the trawl fishery to investigate the potential effectiveness of minimum mesh size and shape regulations to reduce discards of undersize monkfish. Additionally, comparative studies of the size selectivity and catchability of trawls and gill nets should be undertaken in order to understand the differences in the numbers of large fish captured in the two gear types.
5) Another cooperative survey for monkfish should be conducted in 2004.
6) Improved sampling rates (as observed in 2000-2001) for commercial landings should be maintained, which should eventually lead to an age-based assessment approach for this species.
7) Tagging studies should be considered as a basis to evaluate adult movement and rates of growth.
8) Spatial distribution of mature and immature fish and the potential effects of size limits on fishing behavior should be evaluated as a basis for advising on strategies to minimize catch and discard of immature fish.
9) Indices of abundance should be developed from industry “study fleets” including coverage from outside the depth and spatial range of the NEFSC research surveys.

I note that all of these have been adequately addressed or that appropriate research programmes are currently being undertaken.

3.1.8 Recommendations for future goosefish assessments

I suggest that the Working Group undertake the following in time for the next stock assessment for goosefish:

- An examination of the influence of fixed stations on the estimate of biomass from the cooperative research survey should be undertaken.

- An exploration of a geostatistical approach to estimate biomass from the cooperative survey would also be of value.

- There are some concerns with the ageing results. An ageing validation study should be undertaken to confirm the accuracy of catch at age estimates.

- The changes in the distribution in the fishery over time may be influencing the results of the assessment. This should be examined more thoroughly.

- The assessment lacks a reliable forecast. Since commercial catch-at-age data and survey catch-at-age data exist and assuming that ageing can be validated, alternative forward-projecting age structured models should be investigated.

- An examination of transect survey data for changes in the distribution of the population by depth would be informative.

3.2 Weakfish (*Cynoscion regalis*)

3.2.1 Summary

The assessment presented was incomplete and the Working Group had been unable to provide a full response to all of its Terms of Reference. The results presented at SARC 40 were inconclusive primarily as a result of conflicting signals between the commercial and recreational catch at age data and the survey indices used for calibrating the assessment. The assessment presented was of little value for providing fishery management advice. The details are discussed below and suggestions for additional data analyses and investigations prior to choosing an appropriate assessment model are also given.

3.2.2 Comparison with previous assessment (SAW 30)

The previous assessment and advisory report in 2002 concluded that the stock was not overfished. The results of the evaluations undertaken in the present assessment indicate that the status of the stock and its exploitation rate are unclear. Of particular note is the strong retrospective pattern in the results of the assessment with fishing mortality in the terminal (most recent) year being underestimated and stock biomass overestimated by an order of about 50%. This is due to the conflicting signals between the catch at age data and the survey indices used to calibrate the assessment. This retrospective bias was also commented on by the 30th SARC.

3.2.3 Fishery data used for the assessment

The Working Group report provided a very useful summary description of the commercial and recreational fisheries, and the fishery and survey data.

The catch at age data used for the assessment was derived using a combination of scale and otolith readings and conversion from scale to otolith equivalents have been carried out. I note that there is the potential for this process to introduce bias into the catch at age matrix. Furthermore, while otolith circuli are relatively clear and easy to identify, there is as yet no confirmation that these represent annual rings.

A time-series of recreational catch and effort data (MRFSS) is also available for calibration of the catch at age data.

3.2.4 Fishery independent data used for the assessment

Four age-structured research trawl surveys were used as calibration indices in both the surplus production and catch at age models. The surveys are the

National Marine Fisheries Service's fall inshore trawl program originating from the Northeast Fisheries Science Center at Woods Hole, Massachusetts (NMFS trawl), the New Jersey Division of Fish, Game and Wildlife's inshore ocean trawl program (NJDFGW), the Delaware Division of Fish and Wildlife's adult groundfish trawl program in Delaware Bay (DDFW) and the Southeast Area Monitoring and Assessment Program (SEAMAP) from Cape Hatteras, North Carolina through Cape Canaveral, Florida.

The Working Group discussed the merits of each of the surveys noting that only the NMFS survey has had continuous coverage over the period of the catch at age analysis (1982-2004) and that this survey also has had the greatest geographical coverage. I noted that none of the surveys encompasses the distributional area of the stock. In general there is no consistent signal for the catch rate at age between surveys and in addition there is no consistent year-class signal within surveys. Only the 1999 year-class appeared to have a consistent signal in the NMFS survey. The reasons for the inconsistency are not known but should be investigated.

3.2.5 Assessment procedure

The assessment was undertaken using ADAPT. Time series of commercial and recreational catch at age were calibrated using the recreational (MRFSS) and survey series listed above.

3.2.6 Results of the assessment

The assessment results presented were inconclusive primarily due to the inconsistent signals in the catch at age data and the tuning series. Furthermore, these inconsistencies were so great that an acceptable assessment is unlikely using a calibrated catch at age analysis.

3.2.7 Recommendations of previous review

The previous review (SARC 30) recommended the following:

1. Investigate source of the relatively large sum of products correction factor.
2. Obtain mean weights at age corresponding to the catch-weighted mean weight from the catch at age estimation process.
3. Review inputs to VPA, particularly CAA.

The present assessment report adequately addressed 1 and 2 above, but there is a need to further investigate all of the inputs to the catch at age assessment.

3.2.9 Recommendations for future weakfish assessments

There exists a considerable amount of information that in principle should permit an assessment using catch at age analysis. The basic information should be thoroughly evaluated as to its suitability for this approach.

In particular the following should be addressed:

The commercial and recreational data should be examined with regard to its precision and accuracy, both in terms of the absolute estimates of catches and its age composition.

The survey catch rates at age should be evaluated with respect to the spatial and temporal distribution of age groups over time to try to gain an understanding of why there are no consistent year-class signals within surveys.

The survey distributions should be compared to observed changes in the pattern of the fisheries for weakfish to try to explain the inconsistencies in the trends observed in the different series.

Work should be undertaken to validate the ageing methods employed.

3.2.10 Response to questions asked of the SARC

3.2.10.1. Currently, catch-at-age modelling has been done with ADAPT. Given the results to date would the committee suggest other catch-at-age modeling approaches?

The conflicting signals between the commercial and recreational fishery-dependent catch-at-age data and fishery-independent survey catch-at-age indices are so strong, that any catch at age modeling approach is unlikely to resolve these differences and produce an acceptable assessment of stock size and exploitation rates. Efforts should be focused on trying to understand and explain the differences in the basic data, before any catch at age modeling is undertaken.

3.2.10.2 Currently, biomass dynamic modeling has used the logistic form presented in a separate report (B11). Length frequency analysis (B12) and growth modeling (B3) indicate significant growth decline, suggesting a decline in productivity. Possibly, parameters such as *r* and *K* have changed over the period in question. Does the committee have suggestions for alternative approaches?

In principle, the information available is suitable for catch at age analysis. I suggest a thorough investigation of the suitability of the available data for such an approach would be the most productive avenue to pursue in the first instance (see section 3.2.9 above).

3.2.10.3. We have employed both fishery independent and fishery dependent indices in both ADAPT and biomass dynamic models. These have different trends and affect model results differently. The latter often produce negative residuals for recent years. Would the committee have any recommendations on selection among these indices?

I can see no obvious objective means to select which indices are the most appropriate to use either in ADAPT or biomass dynamic models. The conflict is embedded in the data themselves. A thorough examination of the way the data are collected and compiled together with an expert judgement as to whether they are likely to be representative of the dynamics of the stock as a whole is required in order to judge their suitability as stock indicators.

3.2.10.4. Currently, an active hypothesis is that species interactions have influenced stock dynamics, including striped bass competition or predation and possibly decline in important prey species. Modeling approaches in progress are exploring these possibilities, but this work is not completed. Does the committee have suggestions for exploring this hypothesis?

It is premature to explore this hypothesis further since it is largely dependent on subjective appraisal of the existing data. The overriding requirement is to undertake a thorough evaluation of the structure and quality of the data available with a view to evaluating its utility in any assessment model and on which to base any hypotheses pertaining to the results.

4. REFERENCES

Report of the Southern Demersal Working Group meeting held at the Northeast Fisheries Science Center, Woods Hole. MA, USA, October 25 - 27, 2004. A. Goosefish.

Report to the 40th Stock Assessment Review Committee
on preliminary assessment results for weakfish, *Cynoscion regalis* (Sciaenidae). Document B13.

Documents B2-b18, submitted to the 40th Stock Assessment Review Committee on preliminary assessment results for weakfish.

Appendix 1: Panelists

Chair:

Dr Robin M Cook (FRS Marine Laboratory, Aberdeen, Scotland, UK)

Panel members:

Dr John Casey (Centre for Environment, Fisheries and Aquaculture Sciences, Lowestoft, UK)
Dr Norm Hall (Centre for Fish and Fisheries Research, Murdoch University, Western Australia)
Dr Peter Shelton (Department of fisheries and Oceans, St Johns, Newfoundland, Canada)

Appendix 2: Terms of Reference for the Stock Assessments

A. Goosefish/Monkfish

1. Review results of the 2004 Cooperative Monkfish Survey; make comparison to the results of the 2001 survey.
2. Characterize the commercial catch including landings and discards.
3. Update other monkfish survey indices *(i.e.,* NEFSC and MADMF indices) and analyses based on those indices.
4. Evaluate the current status of the stock assessment units relative to existing reference points.
5. *Review, evaluate, and report on the status of the SARC/Working Group Research Recommendations offered in the previous SARC-reviewed assessment (i.e., SAW 34 in November 2001).*

B. Weakfish

1. Characterize commercial and recreational catch including landings and discards.
2. Evaluate adequacy and uncertainty of fishery-independent and dependent indices of relative abundance.
3. Estimate fishing mortality, spawning stock biomass, and total stock biomass for 1981-2003, and characterize the uncertainty of these estimates.
4. Evaluate and update or re-estimate biological reference points, as appropriate.
5. Perform stock projections if possible.
6. Make research recommendations for improving data collection and the assessment.
7. *Review, evaluate, and report on the status of the SARC/Working Group Research Recommendations offered in the previous SARC-reviewed assessment (i.e., SAW 30 in December 1999).*

C. Scup – Assessment withdrawn

1. Characterize the commercial and recreational catch for scup including landings and discards.
2. Estimate fishing mortality, spawning stock biomass, and total stock biomass for the current year, and characterize the uncertainty of these estimates.
3. Evaluate and update or re-estimate biological reference points, as appropriate.
4. Evaluate rebuilding schedules, *i.e.,* provide projections of stock status under various Total Allowable Catch (TAC) and fishing mortality (F) strategies.

Appendix 3: SARC 40 Agenda

40th Northeast Regional Stock Assessment Workshop (SAW 40)
Stock Assessment Review Committee (SARC) Meeting

Aquarium Conference Room - Northeast Fisheries Science Center
Woods Hole, Massachusetts

November 29 – December 2, 2004

AGENDA

TOPIC	PRESENTER	RAPPORTEUR
MONDAY, 29 November (1:00 - 5:00 PM)		
Opening	**John Boreman**, Science Director	
Welcome	**Terry Smith**, SAW Chairman	
Introduction	**Robin Cook,** SARC Chairman	
Agenda		
Conduct of meeting		
Goosefish/Monkfish (A)	**Anne Richards**	**Kathy Sosebee**
SARC Discussion	**Robin Cook**	
TUESDAY, 30 November (8:30 - 5:00 PM)		
Weakfish (B)	**Des Kahn / Jim Uphoff**	**Des Kahn / Jim Uphoff**
SARC Discussion	**Robin Cook**	
WEDNESDAY, 1 December (8:30 - 5:00 PM)		
Weakfish (B) (if necessary)	**Des Kahn Jim Uphoff**	**Des Kahn / Jim Uphoff**
SARC Discussion	**Robin Cook**	
THURSDAY, 2 December (8:30 - 5:00 PM)		
SARC Report writing (closed)		

Appendix 4: Bibliography

SARC 40 documents

Terms of Reference - 40th Northeast Stock Assessment Workshop

Goosefish (Monkfish) documents and materials

Documents provided before the meeting:

Monkfish – SAW 40 Entire Working Group Report

SARC 40: Goosefish (Monkfish) Assessment Summary

The 34th Northeast Regional Stock Assessment Workshop (34th SAW): Public Review Workshop. Northeast Fisheries Science Center reference Document 02-07. March, 2002.

SAW 34 Consensus Summary of Assessments (including text, tables, and figures)

Weakfish documents and materials

Documents provided before the meeting:

B1: Weakfish stock assessment summary. Memo from Jim Uphoff

B2: Assessment of Atlantic Coast Weakfish (Cynoscion regalis), 1999
Report to the Stock Assessment Review Committee (SARC)
February 2000. ASMFC Weakfish Stock Assessment Subcommittee

B3: Weakfish growth analysis, based on 2000 samples from pound net and long haul seine in the Chesapeake Bay and Pamlico Sound. A Report to the ASMFC Weakfish Technical Committee. Desmond Kahn

B4: Fishing mortality based reference points for weakfish in 2000 based on two growth models.

B5: Advisory Report. 2002 Weakfish Stock Assessment

B6: Stock Assessment Of Weakfish Through 2000, Including Estimates Of Stock Size On January 1, 2001. Desmond M. Kahn,

B7: Risk Assessment of Virtual Population Analysis Estimates of Atlantic Coast Weakfish Fishing Mortality and Spawner Biomass during 1982-2000. Jim Uphoff

B8: An evaluation of Separable Virtual Population Analysis as a tool for assessing the stock status of weakfish on the Atlantic Coast of the United States. Janaka A. de Silva

B9: Trends in Weakfish Fishing Mortality and Stock Biomass based on Relative Exploitation from Recreational CPUE and Abundance Indices from Fisheries Independent Trawl Surveys. Victor Crecco.

B10: Powerpoint presentation: Board presentation

B11: Powerpoint presentation: Biomass

B12: Powerpoint presentation: Weakfish proportional densities

B13: Report to the 40th Stock Assessment Review Committee on preliminary assessment results for weakfish, *Cynoscion regalis* (Sciaenidae). Desmond M. Kahn

B14: Weakfish ADAPT output data file

B15: Weakfish ADAPT output plots

B16: Weakfish ADAPT diagnostics

B17: Weakfish ADAPT run 8 output

B18: Weakfish ADAPT run 10 output

30th Northeast Regional Stock Assessment Workshop (30th SAW): Public Review Workshop. Northeast Fisheries Science Center reference Document 00-04. April, 2000.

Additional documents provided:

Weakfish catch-at-age data

ADAPT run descriptions

Powerpoint presentations:

1. Data and ADAPT runs
2. Biomass dynamic modeling
3. Weakfish proportional densities
4. Trophic interactions

Appendix 5: Statement of Work

Consulting Agreement between the University of Miami and CEFAS, Dr. John Casey
September 24, 2004

1. General

The Northeast Regional Stock Assessment Review Committee meeting (SARC) is a formal, multiple-day meeting of stock assessment experts who serve as a peer-review panel for several tabled stock assessments. The SARC is the cornerstone of the Northeast Stock Assessment Workshop (SAW) process, which includes peer assessment development (SAW Working Groups or ASMFC technical committees), assessment peer review, public presentations, and document publication.

The Center for Independent Experts (CIE) shall provide a panel chair and three panelists for the 40th Stock Assessment Review Committee panel. The panel will convene at the Woods Hole Laboratory of the Northeast Fisheries Science Center in Woods Hole, Massachusetts, the week of 29 November 2004 (November 29 – December 2) to review assessments for monkfish (*Lophius americanus*), scup (*Stenotomus chrysops*), and weakfish (*Cynoscion regalis*).

Specific Activities and Responsibilities

Each panelist's duties shall occupy a maximum of 14 workdays; a few days prior to the meeting for document review; the SARC meeting; and a few days following the meeting to prepare a Review Report. The SARC Review Report will be provided to the SARC Chair, who will produce the Summary Report based on the individual Review Reports.

Roles and responsibilities:

(1) Prior to the meeting: review the reports produced by the Working Groups.

(2) During the meeting: participate, as a peer, in panel discussions on assessment validity, results, recommendations, and conclusions especially with respect to the adequacy of the assessments reviewed in serving as a basis for providing scientific advice to management.

(3) After the meeting: prepare individual Review Reports, each of which provides an executive summary, a review of activities and, for each stock assessment reviewed, a summary of findings and recommendations that emerge from the findings, all in the context of responsiveness to the Terms of Reference for each assessment. See Annex 1 for further details on report contents and milestone table below for details on schedule. No later than December 16, 2004, these reports shall be submitted to the

CIE for review[1] and to the Chair for summarization. The CIE reports shall be addressed to "University of Miami Independent System for Peer Review," and sent to Dr. David Sampson, via e-mail to David.Sampson@oregonstate.edu and to Mr. Manoj Shivlani via e-mail to mshivlani@rsmas.miami.edu.

No consensus opinion among the CIE reviewers is sought, and all SARC reports will be the product of the individual CIE reviewer or chairperson.

NEFSC staff and the SAW Chairman will be responsible for the production of the final SARC report, which will include the Chair's Summary Report and the individual panelist's Review Reports. Staff and the SAW Chairman will also be responsible for production and publication of the collective Working Group papers, which will serve as a SAW Assessment Report.

Contact person:
Dr. Terrence P. Smith, NEFSC, Woods Hole, SAW Chairman, 508-495-2230, Terry.Smith@noaa.gov.

[1] All reports will undergo an internal CIE review before they are considered final.